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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,989

02/21/2006

Armin Pieroth

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EXAMINER

MISA, JOAN D

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,989	Applicant(s) PIEROTH ET AL.	
	Examiner JOAN D. MISA	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/21/2009 and 02/05/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 18, 20, 22-35 and 37-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 18, 20, 22-35 and 37-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION***Claim Objections***

Claim 22 is objected to because of the following informalities: in line 2, the phrase "so has to have" should read as "so as to have". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 20, 23, 25, 26, 28, 32-34, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley (EP 0,278,607) and Noel (FR 2,816,802) and Beck et al. (2,610,634), hereinafter Beck.

Regarding claim 1, Kateley discloses a leaf-stripping device, comprising a suction blower (fig.1, 1 & 2) and leaf-stripping tools (3) arranged in front of the suction blower; wherein the blower (1, 2) is configured for producing an air stream through the stripping tools (3) for drawing leaves so that the stripping tools can excise the leaves of the plant (col.2, lines 12-16). However, Kateley does not disclose a leaf-stripping tool comprising a first and a second rotatable cylinder arranged substantially parallel to each other, and wherein the first rotatable cylinder is coupled to a drive motor.

Noel discloses a leaf-stripping device comprising a leaf-stripping tool comprising first (fig.2, 1A) and second (1B) rotatable cylinders arranged substantially parallel to each other, wherein the first rotatable cylinder (1A) is coupled to a drive motor (M1); wherein the leaves are selectively pressed between the first rotatable cylinder (1A) and the second rotatable cylinder (1B) in order to tear the leaves off plants. Using the rollers help to eliminate projections of particles of jagged sheets and decrease the high rate of wound to the fruit bunches (Refer to the English translation of Noel, pg. 1).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the leaf-stripping tool of Noel for the leaf-stripping tool of Kateley as an alternate leaf-stripping tool sufficient in stripping leaves from vines and the predictable result is a leaf-stripping tool that eliminates projections of particles of jagged sheets and decreases the high rate of wound to the bunches and other fruits.

Furthermore, the combination of Kateley and Noel fails to disclose that said first rotatable cylinder includes peripheral grooves disposed circumferentially thereon; wherein the blower is configured for producing an air stream through the grooves for drawing leaves between the first rotatable cylinder and the second rotatable cylinder.

Beck teaches that it is old and well known in the harvesting art for a similar harvesting device comprising first and second cylinders (fig.5, rolls 115 and 29) used for stripping leaf equivalent or husks to have said first cylinder (29) include peripheral grooves (helical flutes 111) disposed circumferentially thereon in order provide an efficient cylinder (col.5, lines 57-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first cylindrical roller of the combination to include peripheral grooves as taught by Beck since such is old and well known in the harvesting art and the predictable result is a more efficient roller.

Furthermore, with the first rotatably cylinder (Kateley: 1A) having peripheral grooves (Beck: 111), the blower (Kateley: 1, 2) can produce an air stream through the grooves for drawing leaves between the first and second rotatably cylinders.

Regarding claim 20, since the applicant does not explicitly disclose the size of the fruit, the examiner views that the width and depth of the grooves (111) on the cylinders of Beck corresponds "roughly" to the size of a fruit, dependent on the type and size of the fruit.

Regarding claim 23, the combination of Kateley, Noel, and Beck further discloses the leaf-stripping device of claim 1, wherein the second cylinder (1B of Noel) is not coupled to the motor and is spring-loaded against the other of the first cylinder (pg.3, lines 21-23 and pg. 6, lines 6-10).

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Regarding claim 25, the combination discloses the leaf-stripping device according of claim 1, except wherein the second cylinder includes an elastic peripheral surface.

Beck further teaches that it is old and well known in the harvesting art for the first cylinder (29) with the peripheral grooves (111) to be paired with a second cylinder (115) made of an elastic peripheral surface (col.6, lines 4-6: resilient roll, col.5, lines 62-64: resilient material, which can be a rubber compound).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second cylinder of the combination to include an elastic peripheral surface as taught by Beck since the use of an elastic peripheral surface to ensure leaves or husks adheres to the cylinder is old and well known in the harvesting art and the predictable result is a more efficient cylinder.

Regarding claim 26, the combination further discloses the leaf stripping device of claim 25, wherein a peripheral surface of the second cylinder includes an elastomer (col.5, lines 62-64: rubber).

Regarding claim 28, the combination further discloses the leaf-stripping device of claim 1, wherein the first and second cylinders (1A/1B of Noel) are aligned substantially vertically and are arranged in a common flow channel with the suction blower (1 & 2 of Kateley).

Regarding claim 32, the combination discloses the leaf-stripping device of claim 1 above, except for a plurality of pairs of first and second cylinders, arranged one behind the other. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of pairs of first and second cylinders to the leaf-stripping device, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *In re Harza*, 124 USPQ 378. See MPEP 2144.04(VI). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the plurality of pairs of first and second

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cylinders one behind the other, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. See MPEP 2144.04(VI).

Regarding claims 33 and 34, the combination further discloses the leaf-stripping device of claim 1 comprising means for mounting the device (fig.3 and col.3, line 34-col.4, line 10 of Kateley) on the front of a vehicle (fig. 3 & 6, tractor 31), per claim 3; wherein the vehicle is a tractor (31 of Kateley), per claim 34.

Regarding claim 40, due to the combination above, and since the applicant does not explicitly disclose the size of the objects, the grooves are able to selectively trap said objects from being suctioned into the air stream, depending on the size of said objects.

Claim 18, 24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley in view of Noel and Beck, as applied to claims 1 or 23 above, and further in view of Bou (FR 2,417,932).

Regarding claim 18, the combination of Kateley, Noel, and Beck discloses the leaf-stripping device of claim 1 above, except wherein the cylinders are designed so that foliage is separated from a plant, and fruits of the plant are not damaged.

Bou discloses a leaf-stripping device wherein the cylinders are designed so that the foliage is separated from a plant, and fruits of the plants are not damaged, by providing a second cylinder (18) with a smaller diameter than that of the first cylinder (11) (pg.2, lines 1-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cylinders of the combination above such that the second cylinder (Noel: 1B) has a smaller diameter than the first cylinder (Noel: 1A), as taught by Bou, in order to ensure foliage is separated from the plant while preventing the fruits from being damaged.

Regarding claim 24, the combination of Kateley, Noel, and Bou discloses the leaf-stripping device of claim 23 above; except the combination does not specify wherein the second cylinder is supported in a lever mechanism and wherein pressure springs bear against the lever mechanism to bias the second cylinder toward the first cylinder.

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Bou discloses a leaf-stripping device wherein a second cylinder (18) is supported in a lever mechanism, wherein pressure springs (20) bear against the lever mechanism to bias the second cylinder toward the first cylinder (11) in order to provide means for rotating the second cylinder without the use of another motor thus simplifying the device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the leaf-stripping device of the combination above to use a lever mechanism to support the second cylinder as taught by Bou in order to provide means for rotating the second cylinder without the use of second motor and thus simplifying the overall device.

Regarding claim 29, referring to the rejection of claim 18 above, the combination of Kateley, Noel, Beck, and Bou discloses the leaf-stripping device of claim 23, wherein a diameter of the second cylinder (1B of Noel modified similarly to 18 of Bou) is smaller than the diameter of the first cylinder (1A of Noel similar to 11 of Bou).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley in view of Noel and Beck, as applied to claim 1 above, and further in view of Praca (3,712,034).

Regarding claim 22, the combination of Kateley, Noel, and Beck discloses the leaf-stripping device of claim 1 above, except wherein the first rotatable cylinder is made from a plastic so as to have a hydrophobic surface.

Praca teaches that it is old and well known in the harvesting art for a similar cylinder (roll 23, particularly referring to end portions 44) to be made of non-deformable materials, such as plastic, in order to have good qualities of adhesion (col.3, lines 53-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first rotatable cylinder of the leaf-stripping device of the combination to be made of plastic as taught by Praca in order to ensure that foliage adheres to the first cylinder due to its good qualities of adhesion.

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With regards to the limitation that said second cylinder is plastic *so as to have a hydrophobic surface*, due to the modification of Praca, the second cylinder of the combination of Kateley, Noel, Beck, and Praca is made of plastic, therefore having a hydrophobic surface.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley in view of Noel and Beck as applied to claim 1 above, and further in view of Pellenc et al. (WO 01/87047).

Regarding claim 27, the combination of Kateley, Noel and Beck discloses the leaf-stripping device of claim 1, except wherein the second cylinder has a wiper mechanism for scraping foliage extending over its length.

Pellenc et al. discloses a leaf-stripping device wherein a cylinder has a similar wiper mechanism (12) extending over its length, which is capable of scraping foliage from the cylinder's surface when the foliage becomes stuck onto the surface (pg.13, line 29-pg.14, line 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the leaf-stripping device of the combination above to include a wiper mechanism (12) similar to that of Pellenc et al. in order to provide means for scraping foliage from the cylinder's surface when the foliage becomes stuck onto the surface and thus provide a more efficient cylinder.

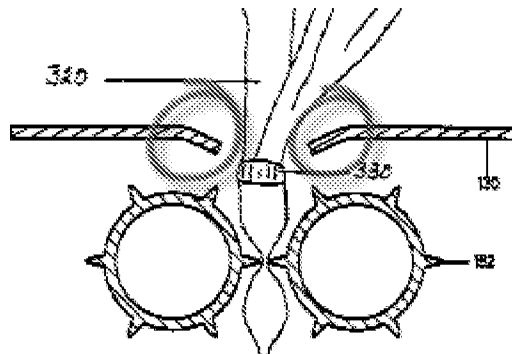
Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley and Noel and Beck and Bou, as applied to claim 18 above, and further in view of Calmer (2003/0172639)

Regarding claim 30, the combination of Kateley, Noel, Beck, and Bou further discloses wherein the first (1A of Noel) and second (1B) cylinders are spanned partially by a cover plate (guide plates 5 of Kateley) arranged on a side facing the foliage that has a cutout (aperture 11). "The guide plates (5) is to partially align the plant material with the cutting apparatus in advance of it as the cutter moves along the foliage to be cut, thus making the passage easier and further reducing the chances of vine wood being damaged by passing straight into the cutout blades" (col.2, line 52-col.3, line 3). However, the combination fails to disclose a cutout with an entry incline for the foliage.

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Calmer teaches that it is desirable for a cutout entry towards a pair of stripping rollers in a similar harvesting device to have an entry incline (see mod.fig.9 below; curved shape) to allow smooth flow of unwanted portions, which are leaves in the case of the leaf-stripping device (para. [0052], lines 5-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the cutout of the combination to have an entry incline, as taught by Calmer, in order to allow smooth flow of leaves into the leaf-stripping device.



Modified Figure 9 of Calmer

Regarding claim 31, the combination of Kateley, Noel, Beck, Bou, and Calmer further discloses wherein the cover plate (5 of Kateley) is fastened to a flow channel on a side facing the foliage.

Claims 35-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Kateley, Noel, Beck, as applied to claim 1 above, and further in view of Calmer.

Regarding claim 35, and referring to the rejection of claim 30 above, the combination of Kateley, Noel, Beck, and Calmer discloses the leaf-stripping device of claim 1, the first and second cylinders (Noel: 1A, 1B) are spanned partially by a cover plate (Kateley: 5) arranged on a side facing the foliage that has a cutout (Kateley: 11), wherein the cutout includes an incline (Calmer: see mod.fig.9 above) along an edge of the cutout. With the addition of the incline due to the modification of Calmer, air flow is minimized towards the cylinder that the incline slants to.

Regarding claims 37-38, the combination further discloses the leaf-stripping device of claim 35, wherein the first rotatable cylinder (Noel: 1A) is made from a plastic (per Praca) so as to have a

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hydrophobic surface configured for reducing leaf crush between the hydrophobic peripheral surface and the second rotatable cylinder, per claim 37; wherein the second rotatable cylinder includes an elastic peripheral surface (per Beck) configured for reducing leaf crush between the elastic peripheral surface and the first rotatable cylinder. Since the first rotatable cylinder (1A) is made of plastic (per Praca) and the second rotatable cylinder (1B) is made of rubber (per Beck), the leaf crush between the two cylinders are considered reduced.

Regarding claim 39, the combination further discloses the leaf-stripping device of claim 35, with regards to the location of the incline, since the cutout (11 of Kateley) is circular, the incline could be located throughout the edge of the cutout in order to allow flow of leaves into the cutout to be smoother. Furthermore, it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. See also, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the incline at a rearward edge of the cutout with respect to the working direction of the leaf-stripping device, and angled towards the second cylinder, since it has been held that rearranging parts of an invention involves only routine skill in the art.

Response to Arguments

Applicant's arguments on pages 8-9 of the Remarks filed 02/05/2009, with respect to the grooves in claim 1 have been considered but are moot in view of the new ground(s) of rejection. Claim 1 is now rejected under Kateley, Noel, and Beck, with Beck teaching the claimed grooves.

Applicant's arguments on pages 9-10 of the Remarks filed on 02/05/2009, with respect to the combination of Kateley and Noel have been fully considered but they are not persuasive. Specifically, applicant argues that the references teaches away from one another since Kateley teaches a paddle fan 2 for sucking in foliage through the aperture 11, while Noel teaches a deflecting shield 11 arranged behind the rotatable cylinders. The examiner respectfully disagrees. Noel teaches using a pair of cylinders as an alternate leaf-stripping tool for stripping leaves from vines or trellis. The combination of

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Kateley and Noel is based on the substitution of one known leaf-stripping tool for another known leaf-stripping tool. The deflecting shield 11 of Noel is used to deflect leaves that have been stripped off by the pair of cylinders 1A/1B and does not teach away from using the cylinders of Noel in the leaf-stripping device of Kateley which uses fan to “suck in foliage”.

With respect to page 10 of the Remarks, wherein applicant argues that Praca is non-analogous art, the examiner respectfully disagrees. Praca teaches a type of roller used in a harvesting device and is therefore considered to be within the field of the Applicant's endeavor.

Applicant's arguments on pages 11-12 and 13-14 of the Remarks, with respect to the cover plate having a cutout with an entry incline in claim 35 and the entry incline being located at a rearward edge of the cutout in claim 39, have been considered but are moot in view of the new ground(s) of rejection. Claim 35 is now rejected under Kateley, Noel, Beck, and Calmer, with Calmer teaching the entry incline along an edge of the cutout (refer to the rationale set forth in the rejection of claim 18). Furthermore, the guide plate 5 shown in Figure 2 of Kateley is equivalent to the claimed cover plate and not the entry incline, which is taught by Calmer, and therefore need not “to be located along an edge of the cutout”. Further refer to the rejection set forth above.

With respect to applicant's argument on page 13, paragraph beginning with “Depending claims 37-38”, although Praca does not specifically disclose a plastic having “hydrophobic peripheral surface”, according to the claim “the first rotatably cylinder is made from a plastic so as to have a hydrophobic surface”. The examiner reads this limitation in such a way that if the first rotatably cylinder is made from plastic, it would have a hydrophobic surface; or that the first rotatably cylinder should be made of plastic so that it would have a hydrophobic surface. Praca teaches that it is old and well known for rollers or cylinders in a harvesting device to be made of plastic. When the cylinder of Noel was modified to be made of plastic, according to the claim, the cylinder would inherently have a hydrophobic surface.

Applicant's arguments on page 14 of the Remarks, with respect to claim 40, have been considered but are moot in view of the new ground(s) of rejection. The claimed grooves are taught by Beck and not Praca, as previously set forth in the rejection above.

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With respect to applicant's argument on page 15, that the inadequacy of Bou or Pellenc does not teach every element of independent claim 1 by not teaching "wherein the leaves are selectively pressed between the rotatably cylinder and the second rotatably cylinder in order to tear the leaves off plants", the examiner notes that this limitation of claim 1 is taught by Noel, which teaches using two rotatably cylinders to tear leaves off plants.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOAN D. MISA whose telephone number is (571)270-3745. The examiner can normally be reached on Monday - Friday, 8:00am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/
Primary Examiner, Art Unit 3671

JDM 9/12/09